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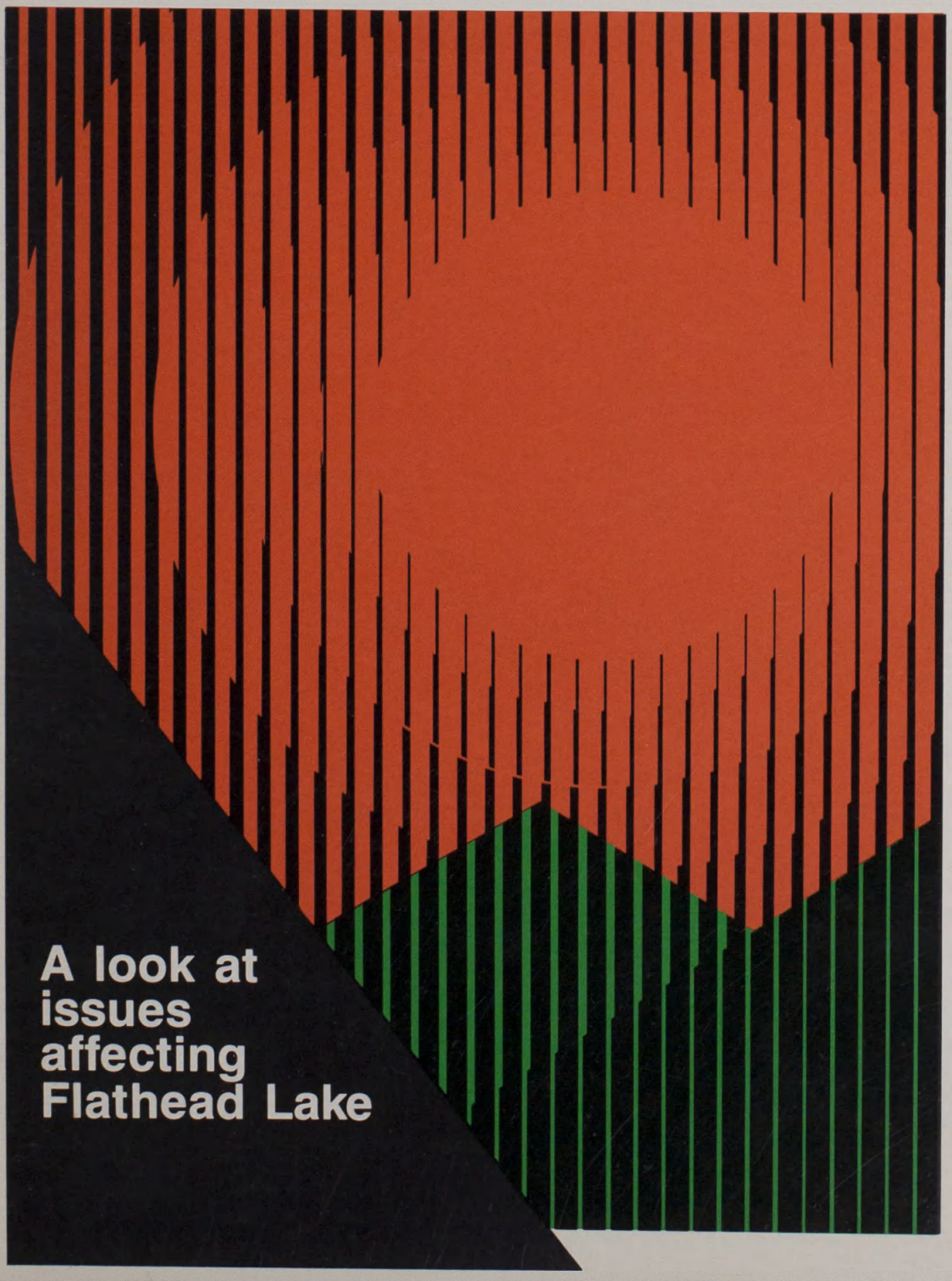

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FLATHEAD LAKE ISSUES

MARY L. LENIHAN
MAXINE C. JOHNSON

A Bureau survey shows water quality a top priority among those living in one of the state's premiere vacation spots.

Flathead Lake is one of Montana's premiere vacation and recreation areas. Situated in Flathead and Lake counties in northwestern Montana, it is one of the largest freshwater lakes in the West. Surrounded by forested mountains and located near the western entrance of Glacier National Park, it has long been a favorite summer retreat for Montanans and a number of out-of-state visitors. With only a small year-round population, the Flathead Lake area offers beautiful surroundings in a relatively undeveloped area.

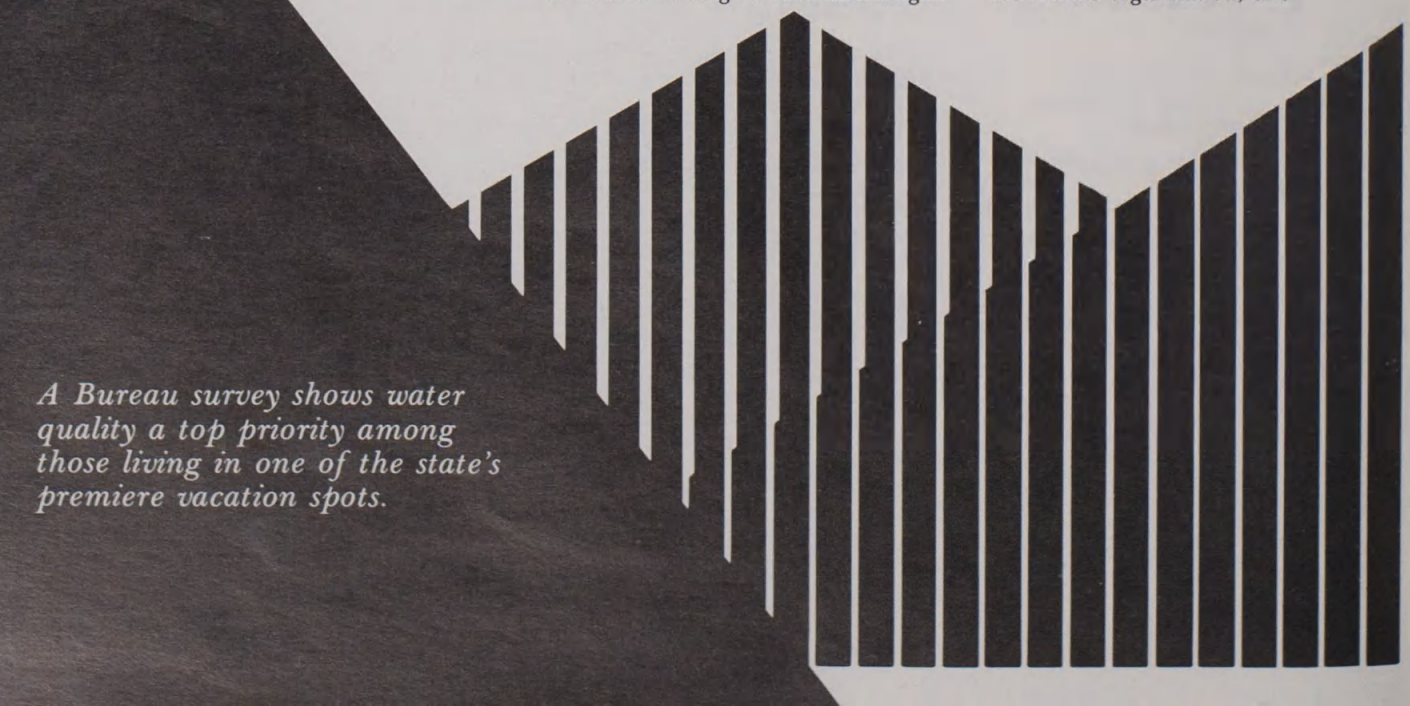
Flathead Lake is part of the Flathead Basin, which stretches into Canada and includes the area drained by the three forks of the Flathead River that join before flowing into the lake. The southern part of the lake is part of the Flathead Indian Reservation, and the lower Flathead River, which connects the lake with the Clark Fork River, flows through the reservation. The Flathead Basin has been in the news frequently in recent years. Lately, there has been concern about water quality. Scientific studies have suggested that water quality and the fish population have suffered recently.

The Flathead Lakers is a citizens' organization composed mostly of lake-area residents and property owners. To determine area residents' concerns and priorities relative to Flathead Lake, the Lakers commissioned the Bureau of Business and Economic Research to survey lakeshore residents and Laker members. The survey was conducted in August 1986 and sought to accomplish two goals. One was to assess lake residents' feelings about current issues related to the lake and the Flathead Basin. The other was to discover what Laker members feel the Laker organization should set as its goals.

Priorities

Other Bureau public opinion surveys have shown that Montanans are concerned about the quality of the environment but that they want a balance between environmental considerations and responsible development. This survey did not address economic development, but instead focused on the current situation at Flathead Lake and future considerations relating to residential lakeshore development. In many ways, the survey results echoed what other Bureau surveys have found; those surveyed voiced environmental concerns, but only a few said they want to stop development altogether. Instead, they supported careful monitoring of the lake's water quality and advocated some possible actions to protect the lake.

Survey participants — both Laker members and nonmembers — were asked to rank five issues with respect to what priority they should be for the Lakers organization. These included public access issues, fishing-related issues, water quality, lakeshore development, and developing a closer working relationship with the Flathead Tribes. It was clear that members of the Lakers organization, and



"Those surveyed voiced environmental concerns, but only a few said they wanted to stop development altogether."

lakeshore residents in general, have serious concerns about Flathead Lake.

The major concern was water quality. Although survey participants generally rated present water quality as either good or excellent, 78 percent of all respondents said water quality should be the first priority of the Flathead Lakers. When rankings of several possible priorities were averaged, water quality received an overall 1.3 ranking — clearly number one. And, there was little disagreement between members and other lakeshore residents about issues affecting the lake (table 1).

Sewage — from upstream towns and from faulty septic tanks — and high density residences along the lakeshore were perceived as the major threats to water quality. It's not surprising, then, that lakeshore development ranked second as a concern for survey participants. Its average ranking was 2.4; 60 percent ranked it as their number one or number two priority issue.

Fishing and fishing-related issues, tribal relationships, and public access issues were of considerably less concern.

Only 27 percent of those responding described themselves as frequent fishers. Fishing issues ranked third as a priority, with an average ranking of 2.9. Thirty-five percent ranked fishing issues as a first or second priority.

Establishing a closer working relationship with the Tribes ranked further down the scale. The average priority ranking was 3.3 and only 27 percent gave tribal relationships first or second priority.

Public access was not an issue for lakeshore residents. Only 17 percent ranked it one or two among their concerns. Average ranking was 3.6 on the scale of one to five. Most respondents felt the current amount of public access is about right. Nearly everyone wanted any new public access facilities located away from residential areas.

Water quality: The number one issue

Water quality is by far the greatest concern of those who live around the lake. Almost 80 percent ranked water quality as the number one issue.

In spite of these concerns, most lake residents (86 percent of all respondents) ranked current water quality as excellent or good. Only 12 percent overall described it as fair or poor. Lakeshore residents living off the reservation — on the northern end of the lake — were somewhat more likely to view water quality as unsatisfactory.

Survey participants considered sewage the number one threat to water quality (table 2). When asked to rate the seriousness of various threats to water quality, more than three-fourths singled out sewage from nearby urban areas as a very serious threat and more than two-thirds said faulty septic systems were a very serious threat.

Those surveyed also considered high-density residences on the shoreline and the proposed Cabin Creek coal mine in British Columbia to be serious threats. Approximately one-half the lake residents thought they were a very serious threat. Another 31 and 27 percent respectively described them as a somewhat serious threat.

A large majority also described the introduction of nonnative species (such as Mysis shrimp and northern pike) into the lake as either a very serious or somewhat serious threat.

There was less consensus about the threats of upstream farming and logging and changes in the water level. A large majority of respondents was apt to label these as somewhat serious or not too serious. Almost two-thirds felt that motorized boats were not a serious threat to water quality and there was little concern about pollution in rain and snow.

Flathead Lake residents supported a number of measures to protect or improve the water quality of the lake (table 3). There was near unanimous approval (90 percent or more) of requiring Kalispell, Bigfork, Columbia Falls, and Whitefish to upgrade their sewage treatment plants; of continued monitoring of the lake's water quality under the auspices of the Flathead Basin Commission; of stricter rules for construction and maintenance of septic systems and drainfields for lakeshore homes; and for encouraging lakeshore residents to use only phosphate-free detergents and cleaning products.

Almost three-fourths of those responding favored stricter rules on the clearing of forested lands, to prevent erosion on the lakeshore and in the drainage basin. Two-thirds or more supported a ban on the use of phosphate detergents and cleaning products in Flathead and Lake counties. (After this study was completed, county commissioners in both counties approved a ban on the sale of such products.)

Support for all these measures was equally strong among Laker members and nonmembers, year-round and seasonal residents, and those living on and off the reservation. In most cases, there were no significant differences of opinion. Year-round and off-reservation residents were somewhat more supportive of a ban on detergents.

Proposals for a sewage system surrounding the lake and connecting every lakeshore home drew mixed reviews. Among all respondents, it was a close call: 43 percent said they were in favor of such a system and 48 percent were opposed. More than half the Flathead Laker members were opposed, as were respondents with seasonal homes and those living on the reservation. On the other hand, 55 percent of those living off the reservation said they favored such a system.

As the preceding paragraphs have suggested, there is general agreement among lakeshore residents with respect to water quality. The majority see sewage — from nearby urban areas and from lakeshore residences — as a very serious threat to the lake.

Residents are concerned about pollution from high-density residences, from the proposed Cabin Creek mine, and from the introduction of nonnative species into the lake. Few see changes in water level, upstream farming and logging, motor boats, or rain and snow as major threats.

Lakeshore residents would require towns on the Flathead River above the lake to improve their sewage treatment plants. They would also support stricter rules for septic systems at lakeshore homes, and they want

"Nearly everyone supported encouraging the use of phosphate-free detergents and cleaning products. . ."

continued monitoring of the lake water. Nearly everyone supported encouraging the use of phosphate-free detergents and cleaning products; a large majority said they would support a ban on such products in Flathead and Lake counties. (As noted earlier, such a ban was subsequently implemented). Survey respondents strongly supported stricter rules for clearing forest lands.

Laker members and nonmembers disagreed on only one of the suggested measures to improve water quality. A majority of Lakers opposed a sewage system surrounding the lake. Nonmembers were almost evenly split on the issue.

Table 1
Priorities for the Flathead Lakers

	Average Ranking Given by:		
	All Respondents	Laker Members	Other Lakeshore Residents
Water quality	1.3	1.2	1.3
Lakeshore development	2.4	2.3	2.5
Fishing issues	2.9	2.9	3.0
Relationship with the tribes	3.3	3.3	3.3
Public access to the lake	3.6	3.7	3.5

Note: The rankings are based on weighted averages of the responses. The highest ranking possible was 1.0.

Table 2
Threats to Water Quality in Flathead Lake

	Very Serious	Somewhat Serious	Not too Serious	Not Serious	No Response
Sewage from nearby urban areas	79%	14%	3%	1%	3%
Faulty septic systems at lakeshore residences	71%	19%	6%	1%	4%
Pollution from high density residences on lakeshore	49%	31%	12%	2%	6%
Pollution from proposed Cabin Creek Mine	48%	27%	11%	4%	9%
Introduction of non-native fish species	43%	24%	12%	6%	15%
Pollution from upstream agriculture	16%	36%	30%	10%	8%
Pollution from upstream logging	14%	32%	34%	11%	9%
Changes in water level	16%	27%	35%	14%	8%
Pollution from motorized boats	5%	24%	41%	22%	8%
Pollution in rain and snow	3%	14%	37%	36%	10%

Note: The percentage detail may not add to 100 due to rounding.

Lakeshore development: Also a high priority

Those responding to the survey agreed that water quality is the number one issue with respect to the lake. Not surprisingly there also was considerable concern about lakeshore development — an issue clearly related to water quality and ranked as the number two priority by survey respondents. Twenty-two percent of survey participants ranked lakeshore development as their number one priority; 34 percent ranked it second. Those respondents living off the reservation — at the northern end of the lake — were a bit more likely to give lakeshore development top priority.

When asked which of four groups — county planning boards, county commissioners, state government, or a special commission appointed by the governor — should regulate developments on the lakeshore, 32 percent chose county planning boards. Another 14 percent said county commissioners, and 4 percent said both should be involved. Altogether, then, more than half the membership opted for county regulation.

Sixteen percent preferred a special commission appointed by the governor; 9 percent said state government should do the regulating. Other groups whose names were volunteered included the Tribes, the Flathead Basin Commission, and a committee of lakeshore owners.

Differences of opinion became evident when respondents were asked whether they felt current subdivision laws were adequate or inadequate to protect the lakeshore. Forty percent of Laker members felt the current subdivision laws are adequate; 46 percent described them as inadequate. Nonmembers were less evenly divided: 36 percent thought the laws are adequate, and 51 percent said inadequate.

Respondents who live off the reservation were most critical of existing subdivision regulations with 55 percent describing them as inadequate.

There was substantial agreement with respect to a moratorium on high-density housing until adequate

"Those responding to the survey agreed that water quality is the number one issue with respect to the lake."

monitoring of water quality is established (table 4). Eighty percent of lakeshore residents favored such a move. Almost three-fourths would approve the establishment of a minimum lot size for any new development.

The level of enthusiasm diminished somewhat when respondents were asked about tougher laws regulating the development of all privately owned lakeshore property. Still, a strong majority (60 percent) approved such measures. Approximately one-third were opposed.

Just over half (53 percent) of respondents would go along with a moratorium on any further lakeshore development until adequate monitoring of water quality is established. Forty-one percent opposed such a moratorium. Temporary moratoriums — pending establishment of adequate monitoring of water quality — may be acceptable to a majority of lake residents, but permanent freezes on development are not. Sixty-one percent said no to a permanent freeze on any further subdivision of lakeshore property. Only one-third said they favored such a freeze. Three-fourths of those responding oppose a permanent freeze on any further development of lakeshore property. On average, only 18 percent were in favor of the measure. Those living off the reservation were more likely to favor a freeze than were residents on the reservation, but the approval rating was only 25 percent.

Table 3
Support for Measures to Protect Flathead Lake Water Quality

	Favor	Oppose	No Response
Requiring Kalispell, Bigfork, Columbia Falls, and Whitefish to upgrade their sewage treatment plants	94%	3%	4%
Continue monitoring the lake's water quality under Flathead Basin Commission	92%	4%	4%
Stricter rules regarding septic systems and drain-fields for lakeshore residents	90%	8%	3%
Encourage lakeshore residents to use phosphate-free cleaning products	89%	7%	4%
Stricter rules on clearing forested lands	72%	22%	6%
Ban use of phosphate products in Flathead and Lake counties	68%	25%	6%
Lakeshore sewage system surrounding lake serving every home	43%	48%	9%

Note: The percentage detail may not add to 100 due to rounding.

Table 4
Support for Measures to Regulate Lakeshore Development

	Favor	Oppose	No Response
Moratorium on high-density housing until adequate water quality monitoring is established	80%	17%	4%
Establishment of a minimum lot size for new lakeshore developments	72%	24%	4%
New, tougher laws regulating the development of all privately-owned lakeshore property	60%	34%	6%
Moratorium on lakeshore development until adequate water quality monitoring is established	53%	41%	6%
Permanent freeze on any further subdivision of lakeshore property	33%	61%	6%
Permanent freeze on any further development of lakeshore property	18%	74%	8%

Note: The percentage detail may not add to 100 due to rounding.

Fishing and fishing issues: Of only moderate concern

A perhaps surprising finding of the survey was that only about a fourth of Flathead Lake residents said they fish frequently. Half said they fish only occasionally, while the remaining one-fourth said they never fish. Slightly more residents from the north end of the lake, off the reservation, reported fishing frequently.

Not too surprisingly, then, most lake residents did not rank fishing issues as a high priority. Only 35 percent said fishing should rank as the Lakers' first or second priority. An

"There was solid unanimity for support of two Flathead area institutions: the Flathead Basin Commission and the University of Montana Biological Station."

equal number ranked it fourth or fifth.

Sixty percent of lake residents said they oppose the introduction of nonnative fish, like walleye or smallmouth bass, into Flathead Lake. Those living off the reservation — at the northern end of the lake — were somewhat more likely than reservation residents to oppose the idea. Those who do not fish offered the least opposition.

All participants in the mail survey, whether they fished or not, were asked how abundant ten different kinds of fish should be: bull trout (Dolly Varden), lake trout (Mackinaws), kokanees (silvers), cutthroat trout (flats), largemouth bass, yellow perch, northern pike, whitefish, rainbow trout, and brown trout. All of these fish are currently found in Flathead Lake, though some are found in much greater numbers than others.

Kokanee salmon were the overwhelming favorite. There was strong agreement among all respondents that kokanee should be the most abundant fish in the lake. Almost 70 percent in nearly every case said this species should be very abundant. Cutthroat trout ranked second, followed by rainbow, bull trout, brown trout, lake trout, yellow perch, whitefish, largemouth bass, and northern pike.

The Confederated Tribes and the Montana Department of Fish, Wildlife, and Parks both have management authority for fish in Flathead Lake. As a result, anyone wishing to fish in the south half of the lake must have both a tribal recreation permit and, if between the ages of fifteen and sixty-one, a Montana fishing license (a conservation license but no fishing license is required for thirteen and fourteen year olds, and those aged sixty-two and over).

Respondents were asked about the possibility of a single fishing permit, usable only in Flathead Lake, with the money going specifically for joint management and water quality regulation in Flathead Lake. This idea was endorsed by a majority of lake residents, with over 60 percent in favor. Less than a third were opposed. Seasonal lake residents, those living on the reservation, and nonfishers were most likely to favor the single permit system.

Lower priority issues: Tribal relationships and public access

Developing a closer working relationship with the Confederated Tribes does not seem to be a high priority among those living around the lake. When asked to rank the priority that the Laker organization should give such action, only 27 percent said it should be the first or second priority. The rest ranked this third or lower. Among those living on the reservation only about a third said this should be the Lakers' first or second priority.

Lake residents seem even less concerned with public access to Flathead Lake. Only 17 percent said public access should be the first or second priority of the Lakers organization.

Probably a reason why public access was not rated highly as a priority is that a majority of survey participants felt that adequate public access to the lake already exists. Sixty-nine percent said that the current number of public parks, boat ramps, etc., is about right. Only 27 percent disagreed, saying there is too little access to the lake. Flathead Laker members, seasonal lake residents, and those living on the reservation were more likely to say that current lake access is adequate. Almost no one said there was too much public access.

There was widespread and overwhelming agreement that Flathead Lake public access areas should be located outside residential areas. More than 80 percent of those responding said boat ramps, public parks, and other access areas should not be in established residential areas.

Opinions about other matters

Flathead Laker members said they strongly support their organization's involvement in the regulation of the water level of Flathead Lake. Eighty-one percent said they favor such activity. Nonmembers were considerably less enthusiastic; still, 67 percent said they favor the idea.

There was solid unanimity for support of two Flathead area institutions: the Flathead Basin Commission and the University of Montana Biological Station. They received endorsement by 75 and 80 percent respectively of all respondents. The question about the Flathead Basin Commission elicited one of the highest nonresponse rates (16 percent), suggesting that a sizable portion of lakeshore residents either are not familiar with the Commission or have no opinion about it.

About the survey

The survey was conducted in July and August, 1986. Questionnaires were mailed in mid-July to 932 persons whose names and addresses were on the Flathead Lakers' mailing list, supplied by the Laker organization. In addition, questionnaires were mailed to all 2,077 rural postal delivery route boxholders who maintain residences in the area immediately surrounding Flathead Lake. Of course, many on the Laker list are also rural postal boxholders and received the second questionnaire. Cover letters accompanying each questionnaire explained the survey; those on the Laker list were asked to return the Laker questionnaire in case they received both.

Altogether, 399 persons on the Laker list completed and returned their questionnaires, for a response rate of 44 percent, a very high percentage for a survey of this type. A total of 463 non-Laker questionnaire forms were completed and returned, for a response rate of 22 percent, also a good response rate for such a general population.

The sample size ensures that the overall results are subject to a maximum margin of error of five percentage points either way, 95 percent of the time, because of chance variations. That is, if one interviewed all Laker members and other lake residents, there is, at most,

only one chance in twenty that the findings would vary from the actual survey results by more than five percentage points.

In addition to the mail survey, a followup telephone survey was completed of 75 persons on the Laker list who had not returned their questionnaires. These were randomly selected from the entire group of Laker nonrespondents. Questions asked were identical to those included on the mail questionnaire. The telephone followup was conducted to see if the nonrespondent Lakers' attitudes differed appreciably from the attitudes of those Lakers who did complete the survey. Except for a few cases, the results indicated the two groups did not differ in their attitudes, and generally confirmed the results obtained by the mail survey.

The telephone survey produced some differences in responses to questions about priorities for the Flathead Lakers. Telephone respondents tended to give lakeshore development a somewhat lower priority and establishing a working relationship with the Tribes a somewhat higher priority than did Laker members who returned the mail questionnaire. However, when the mail and telephone survey responses are weighted and averaged, there was no change in the order of the priorities. Lakeshore development was the number two priority, and tribal relationships ranked fourth.

In a few other cases, there were significant differences in percentage responses between the mail and telephone surveys, but in none of these did the differences change the overall sense of the responses.

About the Lakers and lake residents

The 862 persons who completed and returned the survey questionnaire were asked a few questions regarding their residence on Flathead Lake. This information was needed to look at various subgroups when analyzing the survey results.

Over 40 percent of the Flathead Lake residents responding to the survey reported owning or leasing their lake property more than twenty years (table 5). Flathead Laker members reported much greater longevity. Fifty-two percent had owned or leased for more than twenty years; another 40 percent had been around the lake for eleven to twenty years.

Fifty-nine percent of lakeshore residents said they live there year round; one-third said they are seasonal residents. Sixty-two percent of lakeshore residents said they are within the tribal reservation boundaries. Thirty-five percent said they live off the reservation. □

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Table 5
Characteristics of the Survey Sample

	All Respondents	Laker Members	Other Lakeshore Residents
Residence:			
Year round	59%	44%	72%
Seasonal	33%	49%	20%
On reservation	62%	73%	53%
Off reservation	35%	25%	43%
Tenure:			
5 years or less	10%	1%	18%
6-10 years	13%	5%	19%
11-20 years	33%	40%	27%
Over 20 years	42%	52%	33%

Note: The percentage detail may not add to 100 because of rounding and the omission of miscellaneous responses.

The Reshaping of Montana's Economy:

Looking at Long-Term Changes

PAUL E. POLZIN

A number of important economic and social trends will continue to affect Montana's economy in coming years. Among those mentioned most often are

- the trend toward a service economy,
- the apparent end of the energy crisis,
- the mixed outlook for the natural resource industries, and
- the crisis in agriculture.

Rather than discussing each of these topics in detail and forecasting their potential impact in Montana, we will instead take a historical approach and look at long-term changes in our state's economy.

The historical approach, at first glance, may appear esoteric and academic with only limited applications to today's problems. But only by analyzing the past can we derive realistic estimates of possible future changes. Furthermore, many of today's issues are not new, but reflect trends which have long been present in Montana. In these cases, history can indeed be a good guide to the future.

The data: Where they come from and what they mean

The greatest limitation to a study of long-term economic trends is the availability of reliable and consistent data. For many activities, information has been collected and published for many years. For example, figures for agricultural production and mineral extraction have been published since the 1800s. But comparable information for other important economic activities, such as trade and services, may not be available, or if it is available, the data may be for different years or be otherwise incomparable to figures for other industries.

The data analyzed here are estimates of labor income prepared by the U.S. Bureau of Economic Analysis. This information is useful because it is a broad measure of economic activities, including services, trade, and government as well as commodity production, and was derived using identical methods for a number of states and regions. On the negative side, these data are not available for years prior to 1929, and the very interesting events before this time cannot be analyzed.

Labor income is equal to the wages and salaries, self-employment income, and other labor income of all working persons. It is sometimes called participation income because it represents the earnings of persons participating in the production of goods and services. Because of the correlation between output and amount of labor required to produce it, labor income provides a measure of activity in each industry. In other words, labor income will be used as a rough proxy for output, production, and overall activity in the various sectors of the economy.

We will use data for the fifty-year period from 1929 to 1979. There have, of course, been a number of important events since 1979. But, the concern here is with long-run trends, and the years 1929 and 1979 provide a convenient study period. Using more recent data would probably not change the conclusions.

Montana's economy in 1979

Labor income during 1979 for Montana, the Rocky Mountain region, and the United States is presented in table 1. A rough approximation of the relative size of these economies may be derived from the respective totals. Using these figures, the Montana economy accounted for about 11 percent of the economy of the Rocky Mountain region and roughly 0.3 percent of the total U.S. economy. Similarly, the Rocky Mountain region accounted for approximately 3 percent of the total U.S. economy.

Labor income for each industry provides a rough approximation of the importance of these activities to the various economies. For example, labor income for agriculture accounted for about 4.9 percent of the statewide total. In comparison, wholesale and retail trade accounted for about 18.5 percent of the total. Therefore, we may conclude that agriculture accounted for about 5 percent of Montana's economy in 1979, while wholesale and retail trade represented a little less than 19 percent.

We may compare the relative importance of each of the industries to the economy of each area. Agriculture, for example, is more important in Montana than in the Rocky Mountain region or the United States; it accounted for 4.9 percent of labor income in Montana in 1979, about 4.2 percent in the Rocky Mountain region, and 3.1 percent in the United States.

The important industries determine the character of each economy. Montana, for example, is relatively more dependent on agriculture, wholesale and retail trade, government, and transportation, communication, and public utilities than is either the United States or the Rocky Mountain region. Manufacturing, on the other hand, is much more important to the national economy than to either the Rocky Mountain region or Montana.

Montana's economy is generally more similar to that of the Rocky Mountain region than to the U.S. economy. As shown in table 1, mining accounted for 4.4 percent of labor

"We may attribute the relative importance of government, at least partially, to the physical characteristics of our state."

income in Montana in 1979, while the corresponding figure was 5.6 percent in the Rocky Mountain region but only 1.6 percent in the United States. The same is true for industries that Montana lacks. Manufacturing in the Rocky Mountain region was 15.5 percent, which is closer to the 11.2 percent in Montana than the 26.2 percent in the United States.

The figure for manufacturing in Montana may be somewhat deceptive because several subcategories are very important. Specifically, the wood products and primary metals refining industries, both classified in manufacturing, were (in 1979, at least) relatively more important in Montana than in the United States or the Rocky Mountain region.

Two other industries which are relatively more important in Montana are transportation, communication, and public utilities (which will be shortened to transportation hereafter), and government. The importance of the transportation category may be due primarily to our geography. Montana is located on highways and rail routes connecting the Midwest with the Northwest. This accounts for the disproportionately large number of railroad workers, truckers, and other activities associated with transporting goods from one part of the country to another.

We may also attribute the relative importance of government, at least partially, to the physical characteristics of our state. The U.S. government owns about 30 percent of Montana's land, primarily in the western part, and accounting for the disproportionately large federal civilian category are the U.S. Forest Service, U.S. Bureau of Land Management, and other U.S. government workers associated with land and resource management. Similarly, a small population may lead to the relatively large importance of state and local government. For example, each county requires a sheriff and certain other officials regardless of its population. These fixed costs are spread over fewer people in sparsely populated counties.

Changes in Montana's economy from 1929 to 1979

Conditions change. Industries that were once important may decline while other activities increase. We can identify changes in the structure of economies by analyzing the trends in the relative importance of industries over a long period of time. The calculations reported in table 1 were repeated at ten-year intervals after 1929 and the results are presented in table 2. Data for 1969 were not reported in the interest of brevity; no important information was omitted.

The importance of agriculture has decreased significantly from a peak in 1939, when it comprised 22.7 percent of Montana's economy. The relative importance of labor income on farms and ranches declined continuously to 4.9 percent in 1979. We can attribute the trends in agriculture to changing markets, off-farm migration, consolidation of farms and ranches, and other factors.

Mining also had a downward trend in Montana; its relative importance

Table 1
Labor Income, by Major Industry
United States, Rocky Mountain Region, and Montana
1979

	United States		Rocky Mountain Region		Montana	
	Millions of Dollars	Percentage of Total	Millions of Dollars	Percentage of Total	Millions of Dollars	Percentage of Total
Total, all industries	$1,477,525	100.0	$41,193	100.0	$4,389	100.0
Agriculture, including ag services	46,233	3.1	1,716	4.2	213	4.9
Mining	24,049	1.6	2,309	5.6	195	4.4
Construction	91,836	6.2	3,541	8.6	367	8.4
Manufacturing	386,589	26.2	6,382	15.5	493	11.2
Transportation, communication, and public utilities	113,390	7.7	3,665	8.9	508	11.6
Wholesale and retail trade	243,597	16.5	7,029	17.1	814	18.5
Finance, insurance, and real estate	84,825	5.7	2,267	5.5	213	4.9
Services	248,883	16.8	6,525	15.8	698	15.9
Government	238,123	16.1	7,757	18.8	888	20.2
Federal civilian	56,554	3.8	2,188	5.3	241	5.5
Military	21,563	1.5	784	1.9	74	1.7
State and local	160,006	10.8	4,785	11.6	573	13.1

SOURCE: U.S. Bureau of Economic Analysis, State Personal Income: 1929-82 (Washington, D.C., U.S. Government Printing Office, 1984).

NOTES: Rocky Mountain region includes Colorado, Idaho, Montana, Utah, and Wyoming. Details may not add due to rounding.

"Montana has a growing service sector, and, surprisingly, this is not a new development."

decreased from 11.8 percent in 1929 to about 4.4 percent in 1979. Interestingly, despite the long and drawn out demise of mining in the Butte area, the largest declines occurred years ago; the relative importance of mining dropped more than five percentage points in the ten years from 1929 to 1939, while decreasing only a bit more than two percentage points in the four decades from 1939 to 1979. There were, of course, considerable changes within mining; underground metal mines were replaced by open pit coal mines and oil and gas exploration.

Montana has a growing service sector, and, surprisingly, this is not a new development. Beginning in 1939, the relative importance of services and finance, insurance, and real estate has risen continuously. From 1939 to 1959, the relative importance of services rose from 8.2 to 11.9 percent of total labor income, an increase of 3.7 percentage points. The next twenty years saw a rise of four percentage points, from 11.9 percent in 1959 to 15.9 percent in 1979 (table 2).

Comparisons with other regions

The changes in the structure of Montana's economy do not, by themselves, tell the whole story. While Montana's economy has been changing, so have the national and regional economies. Some account must be taken, therefore, of the changes in Montana relative to the changes that occurred elsewhere. Economists have developed a statistic called the coefficient of specialization to compare one economy to another. The coefficient of specialization is defined as the relative importance of an industry in one region divided by the relative importance of the same industry in a different region. Specifically, looking at the 1979 data for Montana and the United States in table 2, the coefficient of specialization for agriculture is 4.9 percent/3.1 percent = 1.58. Similar calculations comparing all the industries in Montana and the Rocky Mountain region to the United States yield the coefficient of specialization reported in table 3.

The coefficient of specialization is a measure of the relative dependence of a region on a particular industry. If the coefficient is greater than 1.0, the area under study (Montana or the Rocky Mountain region) is relatively more dependent on that industry than the comparison area (the United States). If the coefficient is less than 1.0, the industry is relatively more important to the comparison area (the United States) than in the area under study (Montana or the Rocky Mountain region). Finally, if the coefficient is equal to 1.0, the industry has the same relative importance in both areas.

The coefficients of specialization reported in table 3 confirm earlier conclusions about the structure of Montana's economy. In 1979, agriculture, mining, construction, transportation, trade, and government all had coefficients significantly greater than 1.0, which means that these industries are relatively more important in Montana than in the United States. The coefficients for manufacturing, services, and finance, insurance, and real estate are all less than 1.0, indicating that these industries were relatively more important in the United States. The coefficients of specialization also confirm the similarity between the economies of Montana and the Rocky Mountain region. For each industry, the coefficients are either greater than 1.0 or less than 1.0 (and usually very close in value) in both Montana and the Rocky Mountain region.

It takes only a quick glance at table 3 to note the surprising stability of the coefficients over the fifty-year period. With only two exceptions, Montana industries with coefficients greater than 1.0 in 1929 also were greater than 1.0 in 1979, and those with coefficients less than 1.0 in 1929 were also less than 1.0 in 1979. The same is also true for the coefficients of

Table 2
Labor Income, by Major Industry
United States, Rocky Mountain Region, and Montana
1929 to 1979

	United States					Rocky Mountain Region					Montana				
	1929	1939	1949	1959	1979	1929	1939	1949	1959	1979	1929	1939	1949	1959	1979
Total, all industries	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Agriculture, including ag services	11.6	9.5	9.5	4.6	3.1	21.0	18.7	18.2	8.5	4.2	17.6	22.7	19.8	14.2	4.9
Mining	2.4	2.1	2.0	1.5	1.6	8.6	5.9	4.9	4.5	5.6	11.8	6.6	6.1	4.4	4.4
Construction	5.6	3.9	5.8	6.2	6.2	3.3	4.3	6.8	8.0	8.6	3.4	3.9	7.1	7.6	8.4
Manufacturing	25.5	24.3	27.7	30.1	26.2	11.5	9.7	11.3	14.9	15.5	10.6	8.2	9.4	11.0	11.2
Transportation, communication, & public utilities	10.0	9.0	8.4	7.7	7.7	12.8	11.2	10.9	9.5	8.9	14.4	11.3	12.4	10.7	11.6
Wholesale and retail trade	18.8	19.9	19.9	18.0	16.5	18.5	20.2	20.5	19.4	17.1	18.3	18.4	20.4	19.6	18.5
Finance, insurance, and real estate	5.7	4.9	4.0	5.2	5.7	4.1	3.1	3.2	4.8	5.5	3.0	2.3	2.4	3.9	4.9
Services	13.0	12.5	11.5	13.0	16.8	11.0	9.9	10.4	12.7	15.9	9.9	8.2	9.7	11.9	15.9
Government	7.4	14.0	11.3	13.8	16.1	9.3	17.0	13.7	17.8	18.8	11.0	18.4	12.7	16.8	20.2

SOURCE: U.S. Bureau of Economic Analysis, State Personal Income: 1929-82 (Washington, D.C., U.S. Government Printing Office, 1984). Percentages derived.

NOTES: Rocky Mountain region includes Colorado, Idaho, Montana, Utah, and Wyoming. Details may not add due to rounding.

". . . the precipitous declines in Montana agriculture were matched by a similar nationwide trend. . ."

specialization in the Rocky Mountain region.

Agriculture in Montana had a coefficient of specialization equal to 1.52 in 1929. Despite some ups and downs during intervening years, the 1979 value was 1.58. This indicates that agriculture was about one and a half times more important in Montana than in the United States during both 1929 and 1979. In other words, the precipitous declines in Montana agriculture were matched by a similar nationwide trend, and the relative contribution of farms and ranches remained unchanged in the state.

The coefficient of specialization for manufacturing was also relatively stable. It had a value of 0.42 in 1929. After declining somewhat in the intervening years, the coefficient was 0.43 in 1979. This signifies that manufacturing has remained less than one-half as important for Montana as for the United States throughout the period.

There are perceptible trends in several of the coefficients of specialization. An increasing coefficient indicates a growing contribution of that industry to the local economy relative to its national counterpart. A declining value, on the other hand, denotes a decreasing relative importance of that industry. These trends measure changes in the economic structure of Montana and the Rocky Mountain region relative to changes in the U.S. economy. Stated differently, systematic changes in the coefficient of specialization measure an industry's performance in Montana or the Rocky Mountain region relative to its national counterpart. They indicate the degree to which industry trends in Montana or the Rocky Mountain region diverge from the nationwide trends of that industry.

The coefficient of specialization for mining decreased from 4.92 in 1929 to 2.75 in 1979. This indicates that the contribution of mining has declined more in Montana than in the United States. Notice, however, that most of the decrease occurred between 1929 and 1939, when the coefficient decreased from 4.92 to 3.14. Between 1939 and 1979, the coefficient only decreased from 3.14 to 2.75. This means that most of the declines in Montana mining after 1939 were accompanied by corresponding decreases in the U.S. mining industry, and that events here were simply a reflection of national trends in the industry.

There is no trend in the coefficient of specialization for transportation; it was 1.44 in 1929 and 1.51 in 1979, with a few ups and downs in the interim. This is logical. Montana's unique geographical position has not changed. What has changed in the last fifty years is the technological and technical aspects of transportation. These events occurred nationwide, however, and are reflected in the declining percentages for this industry in the United States as reported in table 2. In other words, there have been changes in this industry, such as the elimination of rail passenger service, increased reliance on trucks, and the current reduction in railroad employment. These have been nationwide trends, however, and the decreases in Montana were simply the local manifestation of these much broader events.

Similarly, there have been dramatic changes in Montana agriculture. But, again, there were analogous changes throughout the United States. Therefore, farms and ranches are still relatively more important to Montana's economy than is the case nationwide, as indicated by the coefficients greater than 1.0. The coefficients vacillated from a low of 1.52 in 1929 to a high of 3.09 in 1959, perhaps reflecting the volatility

Table 3
Coefficients of Specialization
Rocky Mountain Region and Montana, Compared to the United States
1929 to 1979

	Rocky Mountain Region					Montana				
	1929	1939	1949	1959	1979	1929	1939	1949	1959	1979
Agriculture, including ag services	1.81	1.97	1.92	1.85	1.35	1.52	2.39	2.08	3.09	1.58
Mining	3.58	2.81	2.45	3.00	3.50	4.92	3.14	3.05	2.93	2.75
Construction	0.59	1.10	1.17	1.29	1.39	0.61	1.00	1.22	1.23	1.35
Manufacturing	0.45	0.40	0.41	0.50	0.59	0.42	0.34	0.34	0.37	0.43
Transportation, communication, & public utilities	1.28	1.24	1.30	1.23	1.16	1.44	1.26	1.48	1.39	1.51
Wholesale and retail trade	0.98	1.02	1.03	1.08	1.04	0.97	0.93	1.03	1.09	1.12
Finance, insurance, and real estate	0.72	0.63	0.80	0.92	0.96	0.53	0.47	0.60	0.75	0.86
Services	0.85	0.79	0.90	0.98	0.95	0.76	0.66	0.84	0.92	0.95
Government	1.26	1.21	1.21	1.29	1.17	1.49	1.31	1.12	1.22	1.25

SOURCE: U.S. Bureau of Economic Analysis, State Personal Income: 1929-82 (Washington, D.C., U.S. Government Printing Office, 1984). Coefficients of specialization derived.

NOTE: Rocky Mountain region includes Colorado, Idaho, Montana, Utah, and Wyoming.

"What do all the numbers mean? First of all, they suggest that certain features of Montana's economy haven't changed much."

of agriculture itself. Extreme swings in profitability from one year to the next are a well-known feature of this industry.

We looked earlier at the growth in services in Montana and the Rocky Mountain region. Notice that there has been a steady rise in the coefficient of specialization for services, and for finance, insurance, and real estate. This indicates that not only have these industries grown in Montana and the Rocky Mountain region, but they have grown more rapidly here than nationwide. In other words, the trend toward a service economy was actually more pronounced in Montana and the Rocky Mountain region than in the United States. While initially services were less important in both Montana and the region than in the United States, they now are almost equal in importance. Construction and wholesale and retail trade are the only industries where the coefficients of specialization have switched from less than 1.0 in the early years to greater than 1.0 in the later years. This occurred in both Montana and the Rocky Mountain region. In the construction industry, there is no obvious explanation for this trend. As shown in table 2, the U.S. construction industry maintained its relative importance throughout most of the 1929 to 1979 period. In Montana and the Rocky Mountain region, however, construction increased its share of the economy.

Turning to wholesale and retail trade, the data in table 2 show that this industry's share of the U.S. economy declined. It also decreased in the Rocky Mountain region and Montana after some increases, but the reductions were not as great as in the United States, and this led to rising coefficients of specialization in table 3. It may be speculated that the few people and low population density in the rural West have prevented wholesalers and retailers from realizing the same economies as in more populated regions. For example, the economies of scale open to a discounter or other mass merchandiser may not be feasible for small town merchants because of their limited market.

A final word

What do all these numbers mean? First of all, they suggest that certain features of Montana's economy haven't changed much. Industries that were relatively important (or unimportant) in 1929 were also relatively important (or unimportant) in 1979.

Natural resources remain crucial to Montana. Despite decades of consolidation and off-farm migration, agriculture remains roughly twice as important in Montana as in the United States. Similarly, even though there were many shutdowns and closures, mining is almost three times more important in Montana than in the United States.

On the other hand, Montana has not been isolated from important socio-economic events. Services, for example, actually increased more rapidly in Montana than in the United States.

The physical features of Montana play an important role in shaping our economy. Our geographic position between the Midwest and the Northwest determined that transportation industries such as railroads, trucking, and firms serving them (including some activities mistakenly classified as "tourism") are relatively important contributors to the state's economy. Similarly, our small and sparse population is probably the major reason why we devote proportionately more resources to trade and state and local governments.

What about the future? We have seen that certain features of the Montana economy have either remained stable or changed in a systematic manner over the last fifty years. We are probably safe in assuming they will continue. For example, despite further travail in the farm sector, agriculture will continue to be a major contributor to the economy. Similarly, natural resource and transportation industries will continue to be important.

Montana will certainly participate in important socio-economic trends. There may be some "high tech" firms; women may continue to enter the labor force in increasing numbers; new jobs may be created in small firms. But none of these developments is likely to change the underlying features that have shaped Montana's economy. The information presented here shows that history can provide a glimpse into our economic future. □

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What the 1980s Have Meant for Montana's Forest Products Industry

A near-record year for the industry in 1986 demonstrates its resiliency

CHARLES E. KEEGAN III
MARY L. LENIHAN

Montana's forest products industry continues to be very important. In 1986 there were more than 9,000 workers employed in the industry, earning more than $240 million.

Concentrated in western Montana, the industry accounts for 40 to 50 percent of the area's economic base (figure 1). It continues to be the mainstay of western Montana's economy. Approximately 75 percent of the Montanans employed in forest products work in seven western Montana counties: Flathead, Lake, Lincoln, Mineral, Missoula, Ravalli, and Sanders.

Despite extremely difficult operating conditions in the early 1980s, the forest products industry still is an important part of Montana's overall economy. As shown in figure 2, it accounted for 13 percent of the state's economic base in the first half of the 1980s. Despite the rough times, the 13 percent is up slightly from the industry's contribution to the economy during the 1970s, a time of substantial economic growth. (It should be noted, though, that Montana's economic base was smaller in the 1980s, mostly due to poor conditions in mining, agriculture, and other basic industries.)

The first five years of the 1980s were a very difficult period for Montana's forest products industry. The decade began with a three-year recession brought on by a sharp drop in the U.S. housing and construction industries. The recession ended in 1983. The years 1983 through 1985 saw record levels of wood products consumption in the United States, but these were accompanied by very low prices, especially for lumber. The low lumber prices were due to extremely high volumes on the market.

The high volumes came from high levels of domestic production coupled with high levels of Canadian imports. To illustrate, 1985 was a year of record softwood lumber consumption in the United States, but the price for spruce-pine-fir two-by-fours, in constant dollars, was less than half the 1979 price.

The high value of the U.S. dollar affected not just lumber but virtually all wood and paper products in Montana. This is because the exchange rate made it easier for producers in other countries to market their products in the United States, while it was more difficult for U.S. producers to export theirs.

Coinciding with and undoubtedly accelerated by the difficult operating conditions was an industry-wide trend toward mechanization. There also has been a shift toward the production of less labor intensive products, such as studs.

The result has been the loss of 2,000-2,500 forest products industry jobs in Montana between 1979 and 1985. This caused some industry observers to predict that the industry would never regain its prerecession strength.

The industry in 1986

The industry's performance in 1986 dispelled at least some of these predictions. Montana's forest products industry enjoyed record or near-record production and sales levels in 1986.

The Bureau of Business and Economic Research collects quarterly information on the employment and earnings of forest products workers in Montana. Cosponsored by the Montana Wood Products Association, the Bureau's Montana Forest Industries Information System showed that production and sales levels for Montana's forest products firms during 1986 were among the highest in the industry's history. Production of all major products, from lumber and plywood to pulp and paper, particleboard, and fiberboard, reached record or near-record highs last year.

The estimated 1,490 million board feet of lumber produced in 1986 would make that year the second-highest statewide output year on record, exceeded only by the 1,499 million board feet produced in 1968. Plywood production was up, to 671 million square feet in 1986, only 14 million square feet below the record high in 1978.

Sales by Montana mills also were at record levels in 1986. Even after adjusting for inflation, total sales value of $830 million in 1986 approached the peak industry levels of approximately $850 million in 1979

"The near-term outlook through 1988 shows relatively high consumption of wood and paper products."

(figure 3). Prices for forest products, especially for lumber and paper, were up dramatically in 1986 from 1985.

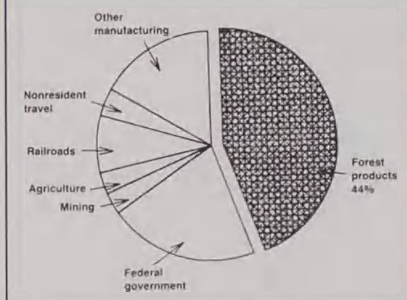
There were several factors contributing to the improved conditions in 1986. The general demand for building products remained strong as mortgage rates reached the lowest levels in years. In fact, 1986 was another year of record lumber consumption in the United States. Other events, in addition to high consumption, led to the higher prices. These included strikes at Canadian and northwestern U.S. sawmills, the lower value of the U.S. dollar, and tariffs and taxes placed on Canadian lumber entering the United States.

1980-1986: What the changes mean

During the 1980-1985 period, Montana's forest products industry suffered the most severe operating conditions since the Great Depression. Perhaps the most noticeable and widely reported impact of those years has been the loss of 2,000 to 2,500 high-paying jobs. The loss of those jobs has certainly been very painful for the workers and for the Montana economy. From a production standpoint, the picture is somewhat different. The industry's ability to produce products has changed very little since 1979. Based on production and capacity, the industry appears much more stable and resilient than many people believed. This resiliency is well illustrated by the 1986 production figures. Capacity to process timber in 1986 was virtually unchanged from 1979 capacity. And again the number of jobs in the industry has decreased primarily because of mechanization and changes in the structure of the industry to less labor intensive kinds of mills.

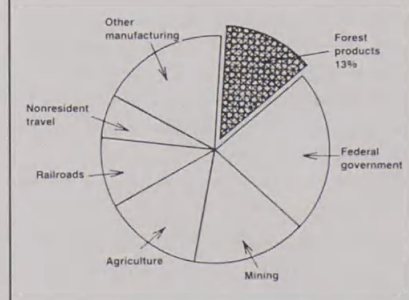
In spite of the job losses there are some positive long-term ramifications of the shift to a less labor intensive industry. Much of the shift has come about through technological advances that have made Montana's industry more competitive. These changes also have made it possible for the industry to use timber that in the past was considered unmerchantable. In many ways, then, the changes that occurred between 1979 and 1986 have made the industry both better able to survive and better able to use the timber resources available.

Figure 1
The Forest Products Industry in Western Montana's Economic Base 1980-1984



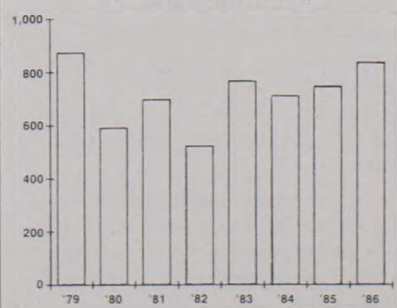
Source: U.S. Department of Commerce, Bureau of Economic Analysis, Regional Economic Information System.

Figure 2
The Forest Products Industry in Montana's Economic Base 1981-1985



Source: U.S. Department of Commerce, Bureau of Economic Analysis, Regional Economic Information System.

Figure 3
Sales Value of Wood and Paper Products Montana, 1979-1986 (Millions of 1986 Dollars)



Source: University of Montana, Bureau of Business and Economic Research, Forest Industries Information System.

An additional benefit of this move toward mechanization is that future fluctuations in employment and payrolls due to year-to-year changes in market conditions may be reduced. Montana's forest products industry may become less volatile as it becomes more capital intensive. This is because more capital intensive plants have higher fixed costs. Therefore, they tend to operate closer to capacity. Also, because of higher fixed-to-variable-cost ratios, they are less willing or less able to close when markets are down.

The capital intensive components of Montana's industry, which include the pulp mill, plywood, particleboard, and fiberboard plants, and larger sawmills, have deviated less from stated capacity historically than have small mills. They also have had more stable employment and payrolls than smaller mills.

The outlook

The near-term outlook through 1988 shows relatively high consumption of wood and paper products. Prices have been good so far in 1987. However, the mills in other regions that were on strike are now back in production. This, coupled with the new U.S. tax law and the new Canadian tax on lumber exported to the United States, lend a degree of uncertainty to the near-term markets, especially the lumber markets.

Industry observers must also be aware that the financial foundation of the industry is weak. While 1986 was a year in which profits for most wood and paper products producers were up substantially, much of the industry operated with little or no profit in the previous six years.

In the longer term, demand for wood and paper products made in Montana is projected to increase dramatically. However, uncertainty over timber supplies still remains a major concern to the industry. What impact will the industry have on the Montana economy in the future? Certainly it appears there is little likelihood that there will be employment growth similar to that of the 1970s. In fact, mechanization and changing industry structure should

"Those concerned about the health of the Montana economy should not neglect this major basic industry."

cause a continuing, though gradual, decrease in total employment. Timber supply problems could also cost jobs.

The production and sales figures for 1986 serve as a timely reminder of the significance of the state's forest products industry. While Montanans are wise to look for other development opportunities to help maintain and diversify their economic base, the forest products industry's good performance in 1986 underscores its continuing importance. Those concerned about the health of the Montana economy should not neglect this major basic industry. □

In addition to the information collected in conjunction with the Montana Wood Products Association, several other sources were used to supply the information presented in this article. These include the Bureau's Forest Industries Data Collection System, an ongoing project developed in conjunction with the U.S. Forest Service Intermountain Research Station, Ogden, Utah, and the Bureau's Economics Montana program, a forecasting system made possible by a grant from Mountain Bell. Additional production and sales figures were obtained from the Western Wood Products Association and the American Plywood Association.

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PAUL LARSON

How to Survive in Montana's Slow-Growth Economy

Recent reports on Montana's economy indicate that many of the state's industries are in a slow or no-growth period. Almost all measures of the Montana economy are lagging behind corresponding national figures. Forecasts do not show this trend changing before 1988.

Small business managers in many Montana industries must confront the reality of slow growth. To be successful in a business where demand has leveled off, companies usually need to adapt their strategies. Some strategic options include: exploiting growth segments, concentrating on improved quality, emphasizing efficiency, "harvesting" the business, and looking for additional business opportunities. This article presents a brief discussion of each.

Operating in a Slow-Growth Environment

Exploiting growth segments

Most industries that experience a leveling of demand still contain "pockets" of growth potential. Nationally, the automobile industry has little overall growth, yet different types of cars do experience dramatic increase in sales. Mini-vans and four-wheel-drive vehicles have experienced recent surges in popularity and sales, for example. The companies that first entered these markets and held them have enjoyed increasing demand. Even colleges and universities use this approach in light of declining student demand. Currently, engineering and business have the highest demand. These are the programs that colleges promote.

The caveat is to analyze different segments of the industry. Concentrate on those that show current or potential future growth.

Promoting quality and innovation

A common misconception is that mature industries have little room for innovation. To the contrary, firms that have strongly emphasized quality and innovation have succeeded despite slowing demand. For example, General Foods continued to pursue research and development in coffee production despite dropping sales. The company developed freeze-dried coffee, an improvement over other instant coffees. Sales of that product have grown steadily and provide General Foods with the highest margin in the industry.

In Montana, a Billings firm has incorporated some services that are novel to the Montana grocery industry. Besides having a wide selection of groceries and a delicatessen, the store features a sitdown restaurant, dry cleaning services, voice-synthesized automatic checkout, a delivery service, and a large variety of non-food items. This unique combination of products and services has generated increased business.

The lesson here is to avoid "writing off" a no-growth business as being closed to innovation. Instead, search for new ways to provide products and services.

Emphasizing operating efficiency

Reducing costs is another way to successfully compete in a slow-growth situation. Intense price competition is common in mature industries. Improving the manufacturing process seems to be the most common approach. Consolidating manufacturing facilities and tighter scheduling can also cut costs. The Japanese are renown for their scheduling efficiency. Another example is cutting carrying costs through tighter inventory control. Still another is broad and efficient distribution to help reduce unit costs.

"Most industries that experience a leveling of demand still contain pockets of potential growth."

The advice here is to closely scrutinize all expenses. In a slow-growth economy there is little room for "fat."

Harvesting a business

Some industries decline so dramatically that there is little hope for future success. In this case, the only alternative may be to "harvest" the business. A typical harvest strategy is a gradual withdrawal from the business rather than a sudden abandonment. It usually entails stringent cost cutting, little capital investment or research and development expenditures, and maximizing short-term cash flow. The cash flow is typically transferred to another industry with greater potential. In many cases sales and market share will not fall below preharvest levels in the short run, and can possibly be maintained.

A harvest strategy is advisable only if the industry or business is clearly declining with little hope of revival and only if the firm can successfully enter another line of business. Choosing a new line of business can be easier if the business operator proceeds carefully.

Choosing a New Business

If the operator of a slow-growth concern decides to harvest his firm and enter another line of business, he must make an obvious decision. What type of business? Of course, knowledge of an industry is essential. For a sound decision, he should consider these factors: market growth, gross margin, entry barriers, exit barriers, and cash flow.

Each of these factors may differ in importance depending on the nature of the business or industry. For example, oil exploration companies might look to expand into a business area that offers a steady cash flow or, ideally, is counter-cyclical to the oil business. In this case, cash flow might outweigh the other factors combined. There are few absolutes in business strategy, as much depends upon a company's unique position.

Market growth

Potential long-term market growth is a key issue to consider when evaluating an industry. Past growth may give some idea. Census documents and industry trade journals might provide trends in past sales levels. A common strategy is to enter an industry when it is small and grow with it. A company's sales can then increase without taking market-share from others.

Predicting long-term growth is difficult. For example, Atari and similar companies undoubtedly wish they had foreseen the short life of the video games market. Looking for an industry or business area with long-term growth potential is important.

Gross margin

The gross margin percentage is the portion of a product's sales price that is mark-up to the consumer. If a clothing store sets its retail prices at double what the items cost, that is a 50 percent margin, which is relatively large. A high gross margin can indicate a comfortable cushion to pay overhead and sometimes can be a desirable characteristic to look for.

The key, once again, is to find out more about the business and evaluate what factors are most important. Publications such as *Robert Morris Associates* and *Dun and Bradstreet* provide industry gross margin and other financial trends. They are available at most libraries.

Entry barriers

Entry barriers, such as high start-up costs, brand loyalty to existing companies, patents, or location inhibit newcomers from entering an industry. Are these prohibitive? Not necessarily. The absence of many entry barriers means the competition might be fierce. For example, it is easy to start a video rental business. The start-up costs are not high, and the skills for running such a business are easily learned. But if one firm can easily enter the business, so can others. The competition can be brutal. The current failure rate of video rental stores attests to this. Ideally, a business operator would look for an industry where entry barriers are low enough to enter the business but high enough so a firm is protected from a large number of competitors.

Linked to the idea of entry barriers is that of "defendable position." The line of thinking is, "I would like to enter an industry easily and *then* make it difficult for others to compete with me." This is a defendable position.

For example, why not open a video store with delivery service? The first store to do so would have a tremendous surge in business. But this would not be a defendable position. All competing stores could easily adopt the same strategy, so the plan would not offer a long-term competitive advantage.

On the other hand, location can provide a defendable position. For example, the ice cream business, especially the retail end, has had traditionally low entry barriers and, thus, much competition. A Missoula firm waited several years to find a location that offers nice surroundings and close proximity to the University of Montana. In this case, location has provided a defendable position and a competitive advantage.

The lesson is to be aware that low entry barriers may make an industry seem attractive, but might allow few possibilities for establishing long-term, defendable strategic advantages. Be wary of them.

Exit barriers

Exit barriers keep firms (prospective competitors) from leaving an industry. A primary exit barrier is the inability to sell assets for a reasonable price. For example, a real estate business has very low exit barriers. When the industry falters, many agents and brokers drop out of the business. A real estate business has few assets to sell. On the other hand, consider a lumber mill. If the industry is down, it is extremely difficult to sell the equipment. The exit barriers for this industry are high.

"To be successful in a business where demand has leveled off, companies usually need to adapt their strategies."

High exit barriers are an unattractive industry feature. Even if a company never leaves an industry, exit barriers affect it. Assume that a lumber mill just survives in a poor economy. It has competitors who are losing money and would like to get out, but cannot sell their assets. They stay in business and perhaps undertake cutthroat measures just to stay afloat. These competitors, faced with high exit barriers, thus further weaken the firm that is maintaining its position and does not wish to exit.

Some might claim that it is a pessimistic attitude to even consider exit barriers before entering an industry, but the realistic business operator knows high exit barriers can intensify competition. Undoubtedly there are many owners of marginal businesses and former owners of bankrupt concerns who wish they had considered this issue.

Cash flow

A business's cash flow features can be attractive or unattractive. Companies in an industry in its early growth stage are usually "cash hogs," and require much cash to finance growth, even though a firm in this situation might show good profits. On the other hand, companies in mature industries are often "cash cows," generating much cash.

If a firm in a slow-growth industry is considering entering another line of business in order to diversify, it should consider whether the cash flow features of the new industry complement the slow-growth firm. Although the prospect of entering a high growth industry is attractive, the cash demands may be excessive. For companies in cyclical industries, a wise choice would be a business that has good cash flow during the low times of the current business. Thus, the business operator seeking to expand into a new business should evaluate the cash flow features of the new business as they relate to the current business.

A recap

Economists are projecting little or no growth for many Montana industries. Managers of firms in those industry segments must adapt to a slow-growth situation and consider changing their strategies. Competitive options include exploiting growth segments, concentrating on quality and innovation, and emphasizing efficiency. Typically, companies employ more than one of these strategies at the same time. In industries where decline is so precipitous that few companies can succeed, a harvesting strategy may be appropriate. Cash flows from the "harvest" can be used to enter another industry. Business operators should evaluate growth potential, gross margin, entry barriers, exit barriers, and cash flow features of the possible new line of business before proceeding. □

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Montanans Divided on Missile Issues

NICOLE FLEMMING

While about half of Montanans polled in March said they favor locating the new Midgetman missiles in Montana, a large proportion said they oppose the move. Those polled also gave mixed reviews on allowing MX missiles in the state.

In addition, many Montanans appeared to view the Midgetman as a source of new jobs and income. The national defense issue came in a distinct second to economic concerns.

These and other findings from the most recent Montana Poll suggest considerable disagreement among Montanans as to the desirability of having more missiles in the state.

The quarterly Montana Poll is conducted by the University of Montana Bureau of Business and Economic Research and cosponsored by the *Great Falls Tribune*. The Poll interviewed 438 Montana adults between February 27 and March 8.

Midgetman and MX: How they fared

Fifty percent of those polled said they favor, either strongly or somewhat, basing the Midgetman missiles in and around Malmstrom Air Force Base. Forty-one percent, however, said they oppose it. Half of those opposing said they did so strongly. Nine percent were undecided.

The debate over placing Midgetman missiles in Montana assumes Congress both approves the plan and allocates the necessary money. At this time, the status of the project is still uncertain.

While more Montanans favor than oppose basing Midgetman missiles in the state, the opposite is true in regard to locating the rail-based MX missiles in Montana.

Just over half of those polled (52 percent) opposed basing MX missiles in the state, while 38 percent favored it. Ten percent were undecided.

Montanans' sentiments toward the MX have changed little in the past few years. The Montana Poll conducted in summer 1983 turned up almost the same proportions for and against. In that Poll, 53 percent opposed the missiles in Montana, while 36 percent were in favor. Ten percent were undecided (table 1).

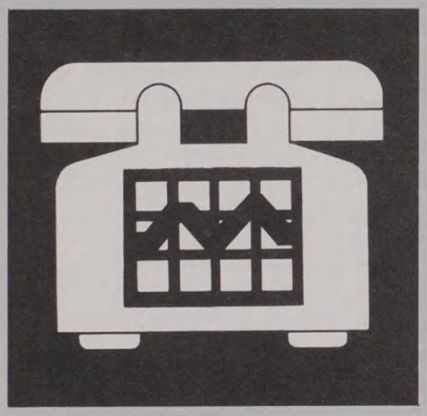
Most groups of Montanans expressed similar views about locating additional missiles in the state. Sex and political affiliation appeared to create the largest differences of opinion.

In general, women were more likely to oppose locating more missiles in Montana. Women were relatively divided on the Midgetman issue, but were decidedly opposed (by roughly two to one) to the location of MX missiles in the state. Men, on the other hand, were split on the MX question but favored the Midgetman project by about two to one.

Those who described themselves as Democrats, or said they lean more that way, were more likely to oppose both missile projects, but more so the location of MX missiles in the state. Their Republican counterparts, on the other hand, tended to favor both, particularly the Midgetman proposal.

Economics and Midgetman

From the very beginning, many of those supporting the Midgetman project have said it would be a good economic move for the state. The project would create several thousand new jobs, replacing some of those good-paying jobs Montana lost during the 1980s.



THE MONTANA POLL

The Montana Poll is cosponsored by the Great Falls Tribune *and the Bureau of Business and Economic Research, University of Montana. The quarterly Poll, conducted by the Bureau and directed by Susan Selig Wallwork, is based on a minimum of 400 telephone interviews with Montanans aged eighteen and older. The interviews are conducted by Bureau interviewers from its offices on the University campus in Missoula. Telephone numbers are randomly generated by computer, using the Bureau's random digit sampling program, and the interviewers then use a second random sampling procedure to select the person in the household to be interviewed. This procedure eliminates interviewer choice in selecting the respondent and assures selection of a representative sample.*

Distribution of the sample based on age, sex, residence, employment status, and income compare favorably with available data on the state population and, thus, the Poll results are considered to be representative of Montana's actual adult population.

As with all sample surveys, the results of the Montana Poll can vary from the opinions of all Montanans because of chance variations in the sample. With a minimum statewide sample of 400, the overall results are subject to a margin of error of five percentage points either way, 95 percent of the time, because of chance variations. That is, if one talked to all Montanans with phones during the survey period, there is only one chance in twenty that the findings would vary by more than five percentage points. Findings for smaller groups of respondents within the overall sample (subsamples based on age, sex, residence, income, etc.) are subject to a somewhat higher margin of error, which would vary depending on the size of the respective subsamples.

Of course, Montana Poll results could also differ from other polls because of differences in the exact wording of questions, different interviewing methods, and differences in when the interviews were conducted.

In fact, the economics of Midgetman seemed to be taking precedence over national defense concerns. When Montanans were asked why they favored or opposed Midgetman, the most frequently cited reason for supporting the missiles was the economic benefits of the project to the state. Sixty percent of those favoring the project referred to the influx of new jobs and/or money into Montana (table 2).

Many fewer Montanans said they favored Midgetman because it was needed for national defense, with only 20 percent of those in favor of the missiles mentioning national defense.

Fourteen percent of those favoring the missiles said that since we already have Minuteman missiles in Montana, we may as well have Midgetman. Montanans' reasons for opposing Midgetman were more varied, with no more than a quarter of the responses the same.

Some Montanans opposing Midgetman said that there are enough or too many nuclear weapons, and we don't need more. Others said that the government already spends too much on defense. Still others said that bringing Midgetman missiles to Montana makes the state a more likely target in event of a nuclear war.

But Montanans' concern about the economic health of their state surfaced again when responding to a question whether the Midgetman proposal should be decided primarily as a military defense issue or an economic issue.

While over half (52 percent) said it should be viewed as a defense issue, a sizeable number (35 percent) said the issue should be decided on the basis of economics. Four percent said decisions should be based on both criteria, and 10 percent said they don't know or gave other comments.

The Great Falls area would, of course, derive the most economic benefit from the Midgetman project, and Poll results show that residents of Cascade County were much more likely to favor the idea than Montanans in general.

Missoula and Yellowstone county residents, on the other hand, were the least likely of the seven largest counties to favor Midgetman, and the most likely to oppose it.

The small number of Poll respondents from each of these counties makes further comparisons difficult, since the survey results become less reliable when comparing such small groups. □

Table 2

Montanans' reasons for **favoring** the placement of Midgetman missiles in the state . . .	
Jobs, economic reasons	60%
Necessary for national defense	20%
Already have nuclear missiles; might as well have more	14%
Montanans' reasons for **opposing** the placement of Midgetman missiles in the state . . .	
Already have enough or too many nuclear weapons	25%
Opposed to nuclear weapons in general	22%
Will make Montana a more likely target in a nuclear war	21%
The government already spends too much on defense	19%
Safety reasons	7%

Note: Percentage detail in each listing above may not add to 100 due to rounding and omission of miscellaneous responses.

Table 1
Montanans' Opinion on Locating Midgetman and MX Missiles in Montana

	Midgetman March 1987	-----MX Missiles----- March 1987	June 1983
Favor	50%	38%	36%
Strongly	20%	13%	11%
Somewhat	31%	25%	25%
Oppose	41%	52%	53%
Strongly	22%	28%	32%
Somewhat	19%	24%	21%
Undecided	10%	10%	10%

Note: Percentage detail may not add to totals or 100 due to rounding.

Mary L. Lenihan, editor of the Quarterly *and a research analyst for the Bureau of Business and Economic Research, is associate director of the Montana Poll. Nicole Flemming, production editor of the* Quarterly, *assists with the Poll. Jim Sylvester, Bureau statistician, is responsible for the Poll's computer programming and data processing.*

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The Bureau of Business and Economic Research is the research and public service branch of the University of Montana's School of Business Administration.

The Bureau is regularly involved in a wide variety of activities, including economic analysis and forecasting, forest products industry research, and survey research.

The Bureau's Economics Montana forecasting system is an effort to provide public and private decision makers with reliable forecasts and analysis. It is made possible by a generous grant from Mountain Bell. These state and local area forecasts are the focus of the annual series of Economic Outlook Seminars, cosponsored by the respective Chambers of Commerce in Missoula, Billings, Great Falls, and Helena.

The Bureau also has available county data packages for all Montana counties. These packages provide up-to-date economic and demographic information developed by the Bureau and not available elsewhere.

The Montana Poll, a quarterly public opinion poll, questions Montanans about their views on a variety of economic and social issues. It is cosponsored by the *Great Falls Tribune*. In addition, the Bureau conducts contract survey research and offers a random digit dialing program for survey organizations in need of random telephone samples.

The Forest Industries Data Collection System, a census of forest industry firms conducted approximately every five years, provides a large amount of information about raw materials sources and uses in Montana, Idaho, and Wyoming. It is funded by the U.S. Forest Service. The Montana Forest Industries Information System collects quarterly information on the employment and earnings of production workers in the Montana industry. It is cosponsored by the Montana Wood Products Association.

Readers of the *Montana Business Quarterly* are welcome to comment on the *MBQ*, request economic data or other Bureau publications, or to inquire about the Bureau's research capabilities.

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